NENUTEC®

INNOVATIVE MEMBER OF SWISTEC

VFZ – flanged globe valves

Stroke 5.5 mm



The appearance of the product may differ from the illustration. Technical specifications are subject to change.

VFZ SERIES

APPLICATION AND USE

VFZ valve bodies are used in HVAC systems to control fluid in heating, cooling, refrigeration, ventilation in residential or industrial buildings. Valves are fitted with female threaded connections in 2 and 3-way versions. 3-way valves must be used as mixing valves. They can also be used as diverting by reducing the max differential pressure value by 50%. Do not use the bypass (angle way) as control port. VFZ valve bodies are motorized by SE4 series electric actuators.

MODE OF OPERATION

Stem up: closed direct way A- AB
(B-AB way open for 3-way valve)

Stem down open direct way A- AB
(B-AB way closed for 3-way valve)

TYPE		CONNECTION	kvs [m^3/h]	MAX DIFF. PRESS. (*) [bar]
2-way	3-way			
VFZ210	VFZ310	G 1/2	0.25	2.5 (10.0)
VFZ211	VFZ311	G 1/2	0.4	2.5 (10.0)
VFZ212	VFZ312	G 1/2	0.63	2.5 (10.0)
VFZ213	VFZ313	G 1/2	1.0	2.5 (10.0)
VFZ214	VFZ314	G 1/2	1.6	2.5 (10.0)
VFZ215	VFZ315	G 1/2	2.5	2.5 (10.0)
VFZ216	VFZ316	G 1/2	4.0	2.5 (10.0)
VFZ218	VFZ318	G 3/4	4.0	2.0 (5.0)
VFZ220	VFZ320	G 3/4	6.3	2.0 (5.0)
VFZ225	VFZ325	G 1	10.0	2.0 (2.5)
VFZ232	VFZ332	G 1 1/4	16.0	2.0 (2.5)
VFZ240	VFZ340	G 1 1/2	18.0	2.0 (2.0)

(*) The values in the brackets are the max diff. pressure when valve is fully closed and actuator is still able to open or close the valve with security. the values outside the brackets are the suggested max pressure drop (valve fully open)

TECHNICAL SPECIFICATION

Nominal pressure:	PN16 (ISO7268/EN1333)
Connection:	female threaded GAS
Valve body:	cast-iron G25
Plug:	brass OT58
Plug gasked:	FKM O-ring
Stem:	stainless steel AISI304
Stem sealing:	FKM O-ring
Stem packing nut:	brass OT58
Spring:	stainless steel AISI304
Stroke:	5.5 mm

Flow characteristics	linear
Leakage:	direct way A-AB perfect sealing
	angle way B-AB 0.2% of k_{VS} value
Rangeability:	50:1
Fluid temperature:	-10...+120°C
Fluids type:	water, water with glycol max. 50%
Dimensions/weight:	see table

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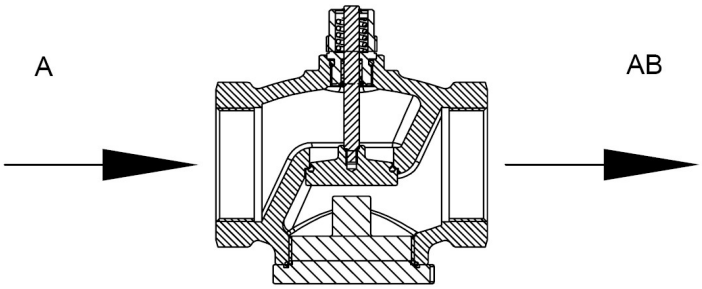
Stroke 5.5 mm

INSTALLATION

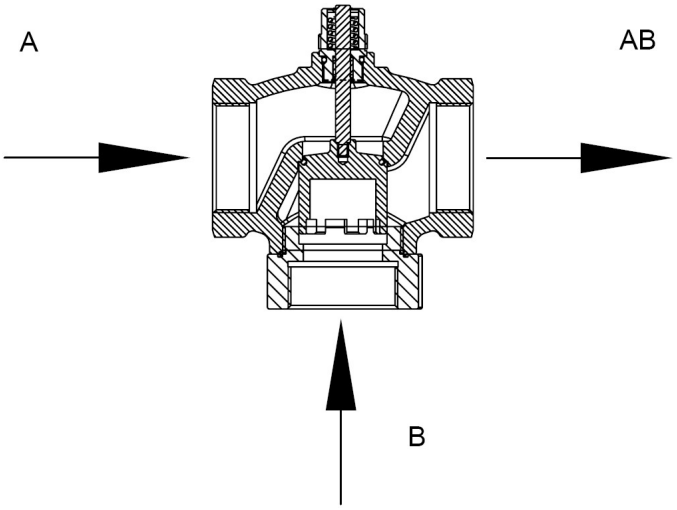
PIPING CONNECTIONS

Make the piping connections according to flow directions indicated on valve body as the following drawings.
AB is always the output. Input is A for 2-way valve, A and B for 3-way valve.

2-way valve



3-way valve



VALVE MOUNTING

Before mounting the valve body be sure that the pipes are clean and free of soldering scraps. Pipes must be lined up squarely with the valve at each connection and free of vibrations. Install the valve/actuator vertically or horizontally but never upside down. Leave sufficient clearance to facilitate the dismantling of actuator from the valve body for maintenance purpose.
The valve must not be installed in an explosive atmosphere or in places in which temperature and humidity are outside ranges indicated in technical specifications. Valve must not be subjected to steam or water jets or dripping liquid. 3-way valve must be used in mixing way fig.2 (2 inlets, 1 outlet). If the valve is used in diverting way (fig.3,1 inlet, 2 outlets), the max differential pressure allowed is reduced by 50%.

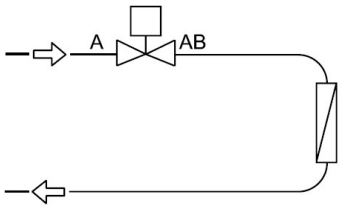


Fig. 1
2-way valve

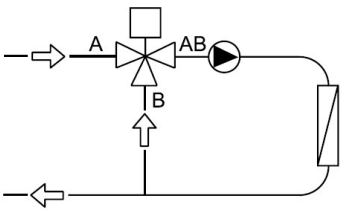


Fig. 2
3-way mixing used in mixing application toward user

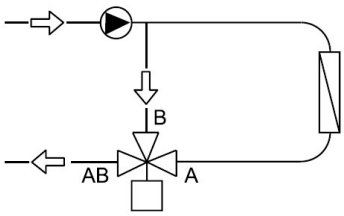


Fig. 3
3-way mixing used in diverting application toward user

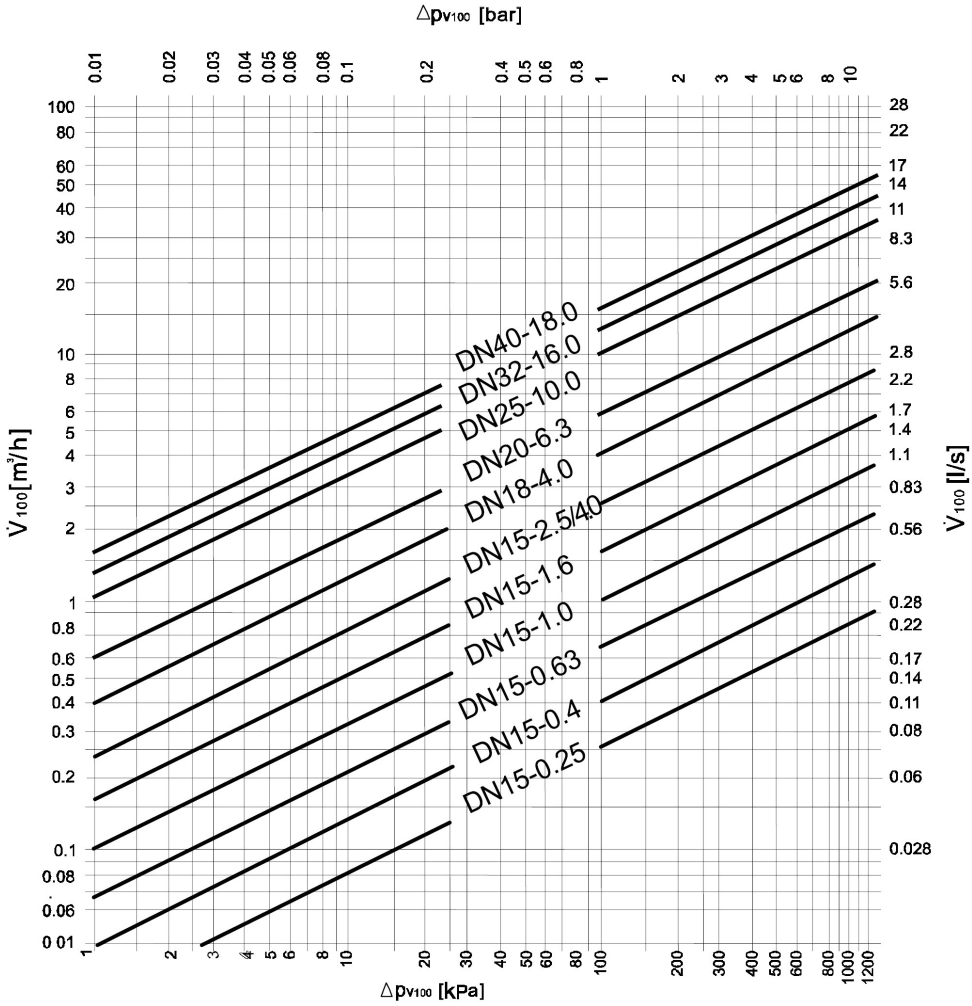
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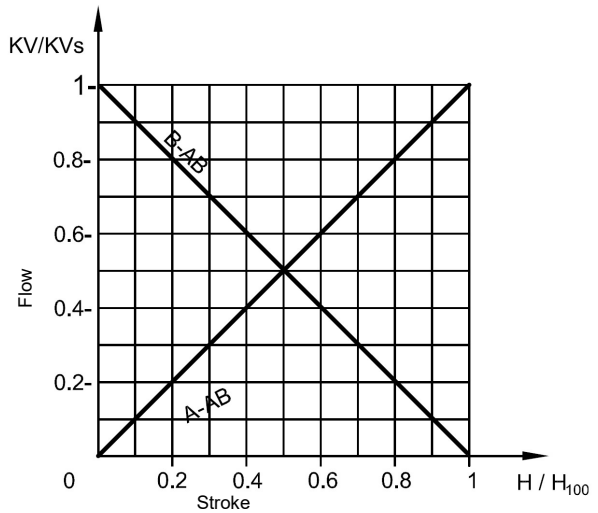
Stroke 5.5 mm

PRESSURE DROP CHART



k_{vs}	Nominal flow rate
V_{100}	Nominal flow rate at Δp_{v100}
ΔP_{V100}	differential pressure drop across fully

FLOW CHARACTERISTIC



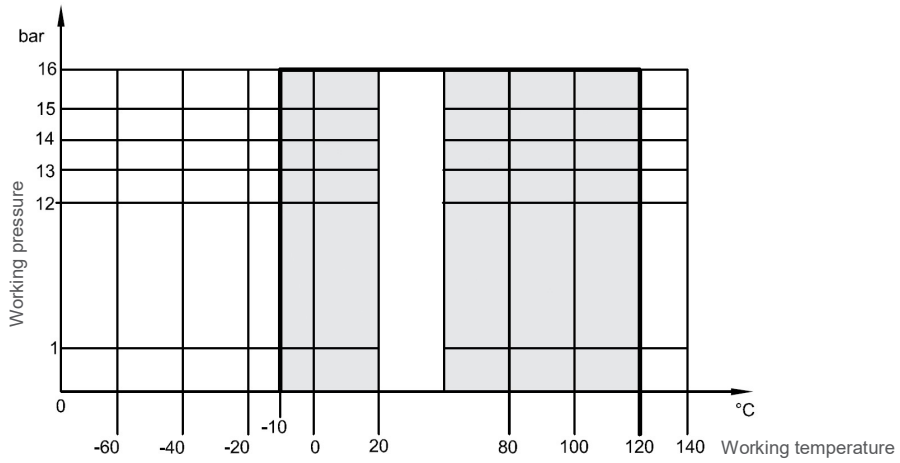
3-way used as mixing inlet in A and B, outlet AB
3-way used as diverting: inlet AB, outlets A and B

AB port	constant flow
A port	variable flow
B port (bypass)	variable flow

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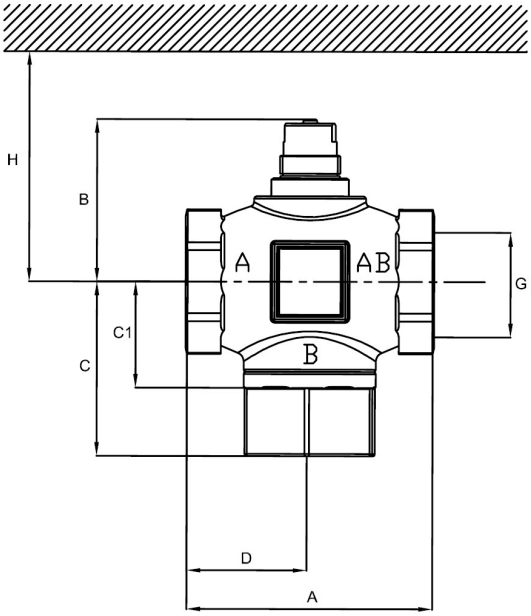
Stroke 5.5 mm

PRESSURE / TEMPERATURE CHART



DIMENSIONS [mm]

G	A	B	C	C1	D	H min.	WEIGIHT [g]	
			VFZ3	VFZ2			VFZ2	VFZ3
G 1/2	66	55.3	40.5	32.5	33.0	205	600	620
G 3/4	90	60.8	56.0	42.0	45.0	210	1050	1150
G 1	96	68.3	59.2	40.5	48.0	220	1400	1150
G 1 1/4	109	71.3	67.2	47.5	54.5	225	1850	2000
G 1 1/2	122	75.8	72.0	55.0	61.0	230	2650	2700



Due to continuous product improvement, specifications are subject to change without notice.

Nenutec Polska

00-236 Warszawa
ul. Świętojerska 5/7
tel.: +48-(0)-504-050225
nenutec@nenutec.pl